(C) IN THE CLAIMS:

1.(Currently Amended): A motor vehicle comprising:

an air storage tank mounted on the motor vehicle;

a drive train including a transmission and an internal combustion engine having a plurality of cylinders, an exhaust pipe from each cylinder and a crank shaft for turning the a transmission;

a multi-stage compressor including at least a first cylinder of the internal combustion engine for operation as a low pressure compression stage to pump air to the exhaust pipe for the first cylinder and a high pressure stage coupled to the exhaust pipe for the first cylinder for actuation and an outlet from the high pressure stage connected to supply high pressure air to the air storage tank;

a controllable discharge valve from the air storage tank; and

~~pressurized air utilization means~~ a drive train booster connected ~~to~~ by the controllable discharge valve to the air storage tank for receiving pressurized air ~~and responsive to compressed air for boosting output of the drive train~~.

2.(currently amended): A motor vehicle as set forth in claim 1, further comprising:

a controller area network;

an engine controller communicating with the controller area network and for determining engine load and engine torque capacity information and for implementing engine compression braking and split mode operation of the engine;

a braking system for retarding vehicle velocity including through requests for engine compression braking placed on the controller area network;

a pressure sensor associated with the ~~high pressure fluid~~ air storage tank for generating pressure signals for the engine controller; and

the engine controller being further responsive to a first minimum pressure sensor reading below the maximum allowed pressure for initiating operation of the multi-stage compressor during engine compression braking and still further responsive to pressure sensor readings below a second greater minimum threshold for initiating split mode operation engine and concurrently initiating operation of the multi-stage compressor during periods when the engine has excess capacity.

3.(currently amended): A motor vehicle as set forth in claim 2, wherein the ~~means for boosting~~ drive train booster comprises a compressed air powered hydrostatic motor coupled to the transmission.

4.(currently amended): A motor vehicle as set forth in claim 2, wherein the ~~means for boosting~~ drive train booster comprises a power turbine coupled to the crankshaft.

5.(currently amended): A motor vehicle as set forth in claim 2, wherein the ~~means for boosting~~ drive train booster comprises:

a supercharger having an exhaust driven power turbine; and

an intake manifold for the internal combustion engine coupled for boost ~~to~~ from the supercharger.

6.(currently amended): A motor vehicle as set forth in claim 1, further comprising:

a pressure sensor for the air storage tank;

~~means~~ a body controller for ~~determining~~ estimating load on the internal combustion engine and for receiving pressure readings from the pressure sensor;

~~means~~ the body controller being responsive to an estimate of a negative load on the internal combustion engine and a ~~first~~ pressure ~~level~~ reading below a maximum allowed level for the air storage tank for initiating pump operation of the at least first cylinder ~~pressure amplifier~~; and

~~means~~ the body controller being further responsive to an estimate of a non-negative load on the internal combustion engine ~~leaving~~ which leaves spare load capacity and a ~~second lower under~~ pressure ~~level~~ reading for the air storage tank below a minimum limit for initiating split mode operation of the internal combustion engine and pump operation of the at least first cylinder ~~pressure amplifier~~.

7.(currently amended): A motor vehicle as set forth in claim 6, further comprising:

a torque request input coupled to the body controller; and

~~means~~ the body controller being responsive to a request for torque and an air pressure reading from the pressure sensor exceeding a boost threshold minimum for directing the opening of the controllable discharge valve to the ~~means for boosting~~ drive train booster.

8.(currently amended): A motor vehicle as set forth in claim 6, further comprising a brake pedal position sensor wherein a negative load on the internal combustion engine is indicated by ~~a~~ brake pedal position sensor signals.

9.(currently amended): A vehicle comprising:

an engine controller

a drive train including a transmission, ~~and~~ an engine having a plurality of cylinders, and an output shaft from the engine, the engine having ~~of which~~ one or more cylinders which can be operated as non-firing air pumps under the control of the engine controller ~~stages, and an output shaft~~;

exhaust pipes from the cylinders;

a shutter valve located in the exhaust pipe for at least one cylinder which can be diverted to operation as an air pump ~~stage~~, the shutter valve being positionable to retard exhaust of air pumped ~~venting~~ from the cylinder;

a fluid amplifier having an input communicating with the exhaust pipe between the cylinder and the shutter valve to operate as second stage high compression fluid pump;

a high pressure storage tank connected to the fluid amplifier to receive compressed fluid; and

a drive train booster connected to the high pressure storage tank to receive compressed fluid.

10.(currently amended): A motor vehicle as set forth in claim 9, further comprising:

a controller area network;

~~an auxiliary~~ controller ~~communicating with the controller area network~~ means for generating a vehicle speed signal for broadcast on the controller area network;

~~an~~ the engine controller communicating with the controller area network for providing engine load and engine torque capacity information and for implementing engine compression braking and split mode operation of the engine during which one or more cylinders operate as non-firing air pumps;

a braking system for retarding vehicle velocity including through requests for engine compression braking placed on the controller area network;

a pressure sensor associated with the high pressure fluid storage tank for generating pressure signals and placing the signals on the controller area network; and

the engine controller being further responsive to pressure sensor readings below the maximum allowed pressure for operating the shutter valve to cause the fluid amplifier to pump fluid into the high pressure storage tank during engine compression braking and still further responsive to pressure sensor readings below a second greater minimum threshold for initiating split mode operation of the engine

and concurrently operating the shutter valve to actuate the fluid amplifier to pump fluid into the high pressure storage tank when internal combustion engine capacity is available.

11.(currently amended): A motor vehicle as set forth in claim 10, further comprising:

a body controller connected to the controller area network for generating requests for torque from the internal combustion engine through the engine controller;

a boost valve actuated by an engine controller for providing pressurized fluid from the high pressure tank to the drive train booster; and

the engine controller being responsive to high transient torque requests and available pressure in the high pressure storage tank for opening the boost valve.

12.(currently amended): A motor vehicle as set forth in claim 11, wherein the drive train booster is a hydraulic motor coupled to drive an automatic or semi-automatic transmission.

13.(currently amended): A motor vehicle as set forth in claim 11, wherein the drive train booster is a power turbine coupled to supply torque to an engine output shaft.

14.(currently amended): A motor vehicle as set forth in claim 11, wherein the drive train booster is a turbo-supercharger.

15.(currently amended): A kinetic energy recovery system for a vehicle, comprising:

an internal combustion engine having a plurality of combustion cylinders and exhaust ports from the combustion cylinders;

a vehicle drive train connected to the internal combustion engine as ~~its~~ prime mover for the vehicle drive train;

a multi-stage air compression system;

one or more cylinders of the internal combustion engine being available as a ~~primary~~ a low pressure stage~~s~~ in the multi-stage air compression system;

a high pressure stage for ~~each low pressure stage in~~ the multi-stage compression system actuated by operation of the low pressure stage for pumping air;

compressed air storage coupled to receive air pumped from the high pressure stage;

a compressed air operated drive train booster coupled by a pressure regulating valve to the compressed air storage;

a controller area network;

sensors distributed about the vehicle providing vehicle information for distribution on the controller area network; and

a ~~vehicle management system~~ body controller and an engine controller coupled to receive information on the controller area network and responsive thereto for coordinating operation of the multi-stage air compression system, the compressed air storage and the drive train booster.

16.(canceled)